



Product designation Product type designation			Power contactor BF09
Contact characteristics			Broo
Number of poles		Nr.	3
Rated insulation voltage Ui IEC/EN		V	690
Rated impulse withstand voltage Uimp		kV	6
Operational frequency			
	min	Hz	25
	max	Hz	400
IEC Conventional free air thermal current Ith		Α	25
Operational current le			
	AC-1 (≤40°C)	А	25
	AC-1 (≤55°C)	А	20
	AC-1 (≤70°C)	А	18
	AC-3 (≤440V ≤55°C)	А	9
	AC-4 (400V)	А	4.9
Rated operational power AC-3 (T≤55°C)			
	230V	kW	2.2
	400V	kW	4.2
	415V	kW	4.5
	440V	kW	4.8
	500V	kW	5.5
	690V	kW	7.5
Rated operational power AC-1 (T≤40°C)			
	230V	kW	9.5
	400V	kW	16
	500V	kW	21
	690V	kW	27
IEC max current le in DC1 with $L/R \le 1$ ms with 1 poles in series			
	≤24V	А	15
	48V	А	13
	75V	А	12
	110V	А	6
	220V	A	_
IEC max current le in DC1 with $L/R \le 1$ ms with 2 poles in series			
	≤24V	А	18
	48V	А	18
	75V	A	17
	110V	A	12
	220V	A	1
IEC max current le in DC1 with $L/R \le 1$ ms with 3 poles in series		_	
	≤24V	A	20
	48V	A	20
	75V	A	20
	110V	A	15

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	220V	А	10	
IEC max current le in DC1 with $L/R \le 1$ ms with 4 poles in series				
	≤24V	А	20	
	48V	А	20	
	75V	А	20	
	110V	А	16	
	220V	А	12	
IEC max current le in DC3-DC5 with $L/R \le 15$ ms with 1 poles in series				
	≤24V	А	10	
	48V	А	9	
	75V	А	8	
	110V	А	2	
	220V	А	_	
IEC max current le in DC3-DC5 with L/R ≤ 15ms with 2 poles in series				
· ·	≤24V	А	13	
	48V	А	11	
	75V	A	10	
	110V	A	7	
	220V	A	2	
IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 3 poles in series	2201	~~~~	2	
	≤24V	А	15	
	48V	A	15	
	40V 75V	A	13	
	110V	A	11	
	220V	A	6	
IEC max current le in DC3-DC5 with L/R $\leq$ 15ms with 4 poles in series	220 V	A	0	
The current leaf bos-bos with $L/R \le 15$ ms with 4 poles in series	≤24V	۸	15	
	≤24V 48V	A	15	
		A	15	
	75V	A	15	
	110V	A	12	
	220V	<u>A</u>	7	
Short-time allowable current for 10s (IEC/EN60947-1)		А	150	
Protection fuse		•	05	
	gG (IEC)	A	25	
	aM (IEC)	A	10	
Making capacity (RMS value)		Α	90	
Breaking capacity at voltage			_	
	440V	A	72	
	500V	А	72	
	690V	A	71	
Resistance per pole (average value)		mΩ	2.5	
Power dissipation per pole (average value)				
	Ith	W	1.6	
	AC-3	W	0.2	
Tightening torque for terminals				
	min	Nm	1.5	
	max	Nm	1.8	
	min	Ibin	1.1	
	max	lbin	1.5	
Tightening torque for coil terminal				
	min	Nm	0.8	
	max	Nm	1	
	min	Ibin	0.8	
			-	



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Maximulation		max	Ibin	0.74
	simultaneously connectable		Nr.	2
Conductor section	AWG/Kcmil			
	AWG/KCMII			10
	Flovible w/e lug conductor paction	max		10
	Flexible w/o lug conductor section	min	mm²	1
		max	mm²	6
	Flexible c/w lug conductor section	IIIdA	111111	0
		min	mm²	1
		max	mm²	4
	Flexible with insulated spade lug conductor section	Пал	111111	7
	Thexible with insulated space by conductor section	min	mm²	1
		max	mm²	4
		Пах		IP20 when
Power terminal protect	ction according to IEC/EN 60529			properly wired
Mechanical features				
Operating position				
		normal		Vertical plan
		allowable		±30°
		5		Screw / DIN rai
Fixing				35mm
Weight			g	360
Conductor section			Ū.	
	AWG/kcmil conductor section			
		max		10
Auxiliary contact char	acteristics			
Thermal current Ith			А	10
IEC/EN 60947-5-1 de	esignation			A600 - P600
Operating current AC	15			
		230V	А	3
		230 V		
		230V 400V	А	1.9
			A A	
Operating current DC	12	400V		1.9
Operating current DC	12	400V		1.9
Operating current DC		400V 500V	A	1.9 1.4
		400V 500V	A	1.9 1.4
		400V 500V 110V	A	1.9 1.4 5.7
		400V 500V 110V 24V	A A A	1.9 1.4 5.7 5.7
		400V 500V 110V 24V 48V	A A A A	1.9 1.4 5.7 5.7 2.9
		400V 500V 110V 24V 48V 60V	A A A A A	1.9 1.4 5.7 5.7 2.9 2.3
		400V 500V 110V 24V 48V 60V 110V	A A A A A A A	1.9 1.4 5.7 5.7 2.9 2.3 1.25
		400V 500V 110V 24V 48V 60V 110V 125V	A A A A A A A A	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1
Operating current DC		400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A A	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55
Operating current DC		400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A A	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55
Operating current DC Operations Mechanical life		400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A A A A	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2
		400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A A A Cycles	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000
Operating current DC Operations Mechanical life Electrical life Safety related data		400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A A A Cycles	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000
Operating current DC Operations Mechanical life Electrical life Safety related data	13	400V 500V 110V 24V 48V 60V 110V 125V 220V	A A A A A A A A A Cycles cycles	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000
Operating current DC Operations Mechanical life Electrical life Safety related data	13 10d according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A A Cycles cycles	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000
Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B1	13 10d according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A A Cycles cycles	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 2000000 2000000 2000000
Operating current DC Operations Mechanical life Electrical life Safety related data Performance level B1	13 10d according to EN/ISO 13489-1	400V 500V 110V 24V 48V 60V 110V 125V 220V 600V	A A A A A A A A A Cycles cycles	1.9 1.4 5.7 5.7 2.9 2.3 1.25 1.1 0.55 0.2 20000000 20000000

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Rated AC voltage at 5	0/60Hz		V	110
AC operating voltage				
	of 50/60Hz coil powered at 50Hz			
	pick-up		0/11-	00
		min	%Us %Us	80 110
	drop-out	max	%US	110
		min	%Us	20
		max	%Us	55
	of 50/60Hz coil powered at 60Hz		,	
	, pick-up			
		min	%Us	85
		max	%Us	110
	drop-out			
		min	%Us	20
		max	%Us	55
AC average coil consu	•			
	of 50/60Hz coil powered at 50Hz			75
		in-rush	VA	75
	of 50/00115 opil powered of 00115	holding	VA	9
	of 50/60Hz coil powered at 60Hz	in-rush	VA	70
		holding	VA VA	6.5
	of 60Hz coil powered at 60Hz	Tolding	٧A	0.0
		in-rush	VA	75
		holding	VA	9
Dissipation at holding	≤20°C 50Hz		W	2.5
Max cycles frequency				-
Mechanical operation			cycles/h	3600
			cycles/h	3600
Mechanical operation			cycles/h	3600
Mechanical operation Operating times	in AC		cycles/h	3600
Mechanical operation Operating times				
Mechanical operation Operating times	in AC	min	ms	8
Mechanical operation Operating times	in AC Closing NO	min max		
Mechanical operation Operating times	in AC	max	ms ms	8 24
Mechanical operation Operating times	in AC Closing NO	max	ms ms ms	8 24 10
Mechanical operation Operating times	in AC Closing NO Opening NO	max	ms ms	8 24
Mechanical operation Operating times	in AC Closing NO	max min max	ms ms ms ms	8 24 10 20
Mechanical operation Operating times	in AC Closing NO Opening NO	max	ms ms ms ms ms	8 24 10 20 14
Mechanical operation Operating times	in AC Closing NO Opening NO	max min max min	ms ms ms ms	8 24 10 20
Mechanical operation Operating times	in AC Closing NO Opening NO Closing NC	max min max min	ms ms ms ms ms	8 24 10 20 14
Mechanical operation Operating times Average time for Us c	in AC Closing NO Opening NO Closing NC	max min max min max	ms ms ms ms ms	8 24 10 20 14 28
Mechanical operation Operating times Average time for Us co UL technical data	in AC Closing NO Opening NO Closing NC Opening NC	max min max min max min	ms ms ms ms ms ms	8 24 10 20 14 28 7
Mechanical operation Operating times Average time for Us co UL technical data	in AC Closing NO Opening NO Closing NC	max min max min max min max	ms ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us co UL technical data	in AC Closing NO Opening NO Closing NC Opening NC	max min max min max min max at 480V	ms ms ms ms ms ms ms ms	8 24 10 20 14 28 7 18 7.6
Mechanical operation Operating times Average time for Us co UL technical data Full-load current (FLA)	in AC Closing NO Opening NO Closing NC Opening NC	max min max min max min max	ms ms ms ms ms ms ms	8 24 10 20 14 28 7 18
Mechanical operation Operating times Average time for Us co UL technical data	in AC Closing NO Opening NO Closing NC Opening NC opening NC opening NC	max min max min max min max at 480V	ms ms ms ms ms ms ms ms	8 24 10 20 14 28 7 18 7.6
Mechanical operation Operating times Average time for Us co UL technical data Full-load current (FLA)	in AC Closing NO Opening NO Closing NC Opening NC	max min max min max min max at 480V at 600V	ms ms ms ms ms ms ms A A	8 24 10 20 14 28 7 18 7.6 0.375
Mechanical operation Operating times Average time for Us co UL technical data Full-load current (FLA)	in AC Closing NO Opening NO Closing NC Opening NC opening NC opening NC	max min max min max min max at 480V at 600V	ms ms ms ms ms ms ms ms ms HP	8 24 10 20 14 28 7 18 7.6 0.375 0.75
Mechanical operation Operating times Average time for Us co UL technical data Full-load current (FLA)	in AC Closing NO Opening NO Closing NC Closing NC Opening NC opening NC	max min max min max min max at 480V at 600V	ms ms ms ms ms ms ms A A	8 24 10 20 14 28 7 18 7.6 0.375
Mechanical operation Operating times Average time for Us co UL technical data Full-load current (FLA)	in AC Closing NO Opening NO Closing NC Opening NC opening NC opening NC	max min max min max min max at 480V at 600V	ms ms ms ms ms ms ms ms ms HP	8 24 10 20 14 28 7 18 7.6 0.375 0.75

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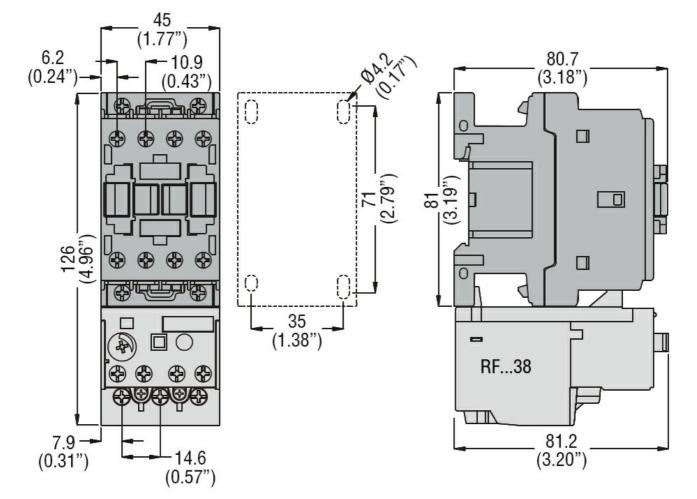
THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 50/60HZ, 110VAC, 1NO AUXILIARY CONTACT

		220/230V	HP	3
		460/480V	HP	5
		575/600V	HP	7.5
General USE				
	Contactor			
		AC current	А	25
	Auxiliary contacts			
		AC voltage	V	600
		AC current	А	10
		DC voltage	V	250
		DC current	А	1
Short-circuit protec	ction fuse, 600V			
	High fault			
	-	Short circuit current	kA	100
		Fuse rating	А	30
		Fuse class		J
	Standard fault			
		Short circuit current	kA	5
		Fuse rating	А	60
Contact rating of au	uxiliary contacts according to UL			A600 - P600
Ambient conditions	<u>,</u>			
Temperature				
	Operating temperature			
	1 0 1	min	°C	-50
		max	°C	70
	Storage temperature			
		min	°C	-60
		max	°Č	80
Max altitude			m	3000
Resistance & Prote	ection			
Pollution degree				3
Dimensions				<u> </u>

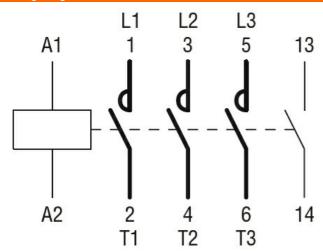
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THREE-POLE CONTACTOR, IEC OPERATING CURRENT IE (AC3) = 9A, AC COIL 50/60HZ, 110VAC, 1NO AUXILIARY CONTACT



Wiring diagrams



## Certifications and compliance

Compliance	
	CSA C22.2 n° 60947-1
	CSA C22.2 n° 60947-4-1
	IEC/EN/BS 60947-1
	IEC/EN/BS 60947-4-1
	UL 60947-1
	UL 60947-4-1
Certificates	
	CCC
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CULus EAC ETIM classification

ETIM 8.0

EC000066 -Power contactor, AC switching